



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,724	07/08/2005	Stephane Lavallee	Beaumont-12	5647
<div>7590 Plevy Howard &amp; Darcy P O Box 226 Fort Washington, PA 19034</div>			<div>EXAMINER LARYEA, LAWRENCE N</div>	
			<div>ART UNIT 3768</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 09/04/2008</div>	<div>DELIVERY MODE PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/518,724	<b>Applicant(s)</b> LAVALLEE ET AL.	
	<b>Examiner</b> LAWRENCE N. LARYEA	<b>Art Unit</b> 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/22/2006</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
2. Claims 2-7 are objected to under 37 CFR 1.75(c), as being of **improper dependent** form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 2-7 do not pass the test for a **proper dependent claim** because dependent claim 2-7 do not necessarily include every limitation of the parent claims. Therefore, the dependent claim could conceivably be infringe on claim 1.

3. Claim 8 is objected to under 37 CFR 1.75(c), as being of **improper dependent** form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 8 does not pass the test for a **proper dependent claim** because dependent claim 8 does not necessarily include every limitation of the parent claims. Therefore, the dependent claim could conceivably be infringe on claim 1.

4. Claims 9-10 are objected to under 37 CFR 1.75(c), as being of **improper dependent subcombination** form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 9-10 does not pass the test for a **proper dependent subcombination claims** because dependent claim 9 or 10 does not necessarily include every limitation of the parent claims. Therefore, the dependent claim could conceivably be infringe on claims 1 and 8. See Ex parte Porter, 25 USPQ2D 1144.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 3 recites the limitation "the reference frame".

There is insufficient antecedent basis for this limitation in the claim.

Claim 4, line 2 recites the limitation "the configuration".

There is insufficient antecedent basis for this limitation in the claim.

7. Claim 4, line 3 recites "its." This limitation renders the claim indefinite because one cannot be certain what "its" is intended to refer to.

Claim 6, lines 2-3 recite the limitation "the acquisition of two images".

There is insufficient antecedent basis for this limitation in the claim.

Claim 7, lines 4 recites the limitation "impressions".

There is insufficient antecedent basis for this limitation in the claim.

Claim 7, line 5 recites the limitation "the projection".

There is insufficient antecedent basis for this limitation in the claim.

Claim 8, line 4 recites "it." This limitation renders the claim indefinite because one cannot be certain what "it" is intended to refer to.

Claim 8, line 5 recites the limitation "the determination directions being non coplanar". There is insufficient antecedent basis for this limitation in the claim.

Claim 9, line 2 recites the limitation "the cylinders".

There is insufficient antecedent basis for this limitation in the claim.

8. Claim 1 recites "a method for determining the position of a device providing images by mean of x ray....." ", but, since the claim does not set forth any steps involved in the method/ apparatus, it is unclear what method/process applicant is intending to encompass. The body of the claims appears to set forth method steps although no positive, active method steps are recited to define a method claim.

9. Claims 2-7 recite "the device claim .....", but, since the claim does not set forth any positive structural limitations involved in the apparatus, it is unclear what apparatus applicant is intending to encompass. The body of the claims appears to indicate an apparatus claim although no apparent structural limitations are set forth to define the apparatus.

Art Unit: 3768

10. Claims 8-10 recite “a target for the device...” but, since the claim does not set forth any steps or positive structural limitations involved in the method/ apparatus, it is unclear what method/ apparatus applicant is intending to encompass. The body of the claims appears to indicate an apparatus claim although no apparent structural limitations are set forth to define the apparatus.

### ***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1-7 are rejected under 35 U.S.C. **102(e)** as being anticipated by **Zheng et al (Patent 7,117,027)**

13. Re Claims 1-3 and 7: **Zheng et al** teach a method for determining the position of a device providing images by means of X rays with respect to the reference frame as an image of an object is taken characterized in that the position of the device (16) with respect to a reference frame is determined based on the determination of the position with respect to the device (16) (**See Col. 7, lines 1-14, Col. 4, lines 54-67**) of a target **(1)** , mechanically connected to the object **(bone)** , by means of the impression **(29)** of the target on the image, a localization system **(4)** and a rigid localization body **(2)** mechanically connected to the target.

Art Unit: 3768

14. Re Claims 4-6: **Zheng et al** teach a system for determining the position of a device having a configuration of the target is determined by a feeler **(22)** connected to a rigid localization body **(28)** having its position with respect to the reference frame determined by a localization system and the target is capable of been removed from the object between the acquisition of two images (first and second images) **(See Col.7, lines 52-67)**.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Zheng et al (Patent 7,117,027) as applied in claim 1**, in view of **Krause et al (US Pub. 2004/0068187 A1)**.

17. **Zheng et al** teach the claimed invention see supra rejection, **Zheng et al** does not teach that the target comprises X rays transparent elements and X rays opaque elements and a hold means.

18. **Krause et al** teach a system for determining the position of a device wherein a target comprises X rays transparent elements, X rays opaque elements and a hold means **(See Figs 18,19,27 Paragraph [0174], [0178] and [0183])** in order to assist

Art Unit: 3768

orthopedic surgeon to generate a computer-based 3D model of a patient's bone and computer-based surgical plans.

It would have been obvious to one having ordinary skill in the art at the time invention was made to modify the system/method for determining the position of a device of **Zheng et al** to include a target which comprises X rays transparent elements and X rays opaque elements and a hold means of **Krause et al** in order to assist orthopedic surgeon to generate a computer-based 3D model of a patient's bone and computer-based surgical plans (**See Paragraph [0003]** ) as taught by **Krause et al**.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAWRENCE N. LARYEA whose telephone number is (571)272-9060. The examiner can normally be reached on 9:30 a.m.-5:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3768

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LNL

/Eric F Winakur/  
Primary Examiner, Art Unit 3768